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Preface

Jean-Michel Severino

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PREFACE

Jean-Michel Severino
CEO, Investisseurs & Partenaires

"The initiatives discussed in this issue of FACTS are not only new economic models, but also new social models."

"This issue of FACTS deals with a social and technological revolution that is still in its early days: decentralized energy in developing countries."

The full impact of this revolution is yet to be determined, but it is sure to be profound. In a conservative scenario, which would already represent a great success, this revolution would be a phase of acceleration towards the centralized model of industrial countries. In a more optimistic scenario, the revolution would create (notably in Africa, which is the ideal region for such) a new energetic model that is the complete opposite of centralized models. And taking the scenario to its extreme, the revolution would spread to industrialized countries, thus becoming a new example of "reverse innovation".

It is still too soon to judge. Evolutions in technology, among many other factors, will decide the outcome. It is nevertheless already probable that, over the next two or three decades, hundreds of millions of households in Africa, Asia and Latin America will see their quality of life transformed: which is no small achievement.

But the story doesn't stop there. The initiatives discussed in this issue of FACTS are not only new economic models, but also new social models. Applications of decentralized energy include provision of solar lamps, individual solar systems, kiosks, and mini-grids. The first three of these — which are also the most important quantitatively — have the common defining characteristic of connecting the consumer directly to the manufacturer or service provider. In these energy models, there is no energy producer, only suppliers of solutions. This is what allows new businesses, whether for profit or not-for-profit, to escape the constraints of energy sector regulations that render the sector incapable of providing energy to poor populations, as is the case with the often ineffective and inefficient national energy utilities. Households or small businesses, currently mostly rural or peri-urban, are no longer beholden to an inexistent or patchy public service, and become customers, beneficiaries of a growing number of competitive offers. Anyone who understands the energy industry will immediately see the important political and institutional consequences of this shift.

It's also an exciting tale of innovation. Take individual solar systems, for example ; their novelty derives from the combination of three great recent innovations: the mobile telephone, photovoltaic energy, and microfinancing. This story is ongoing, because the technological solutions in question will continue to evolve, as will economic models: how far, for example, will production and storage capacities of individual systems continue to grow, and could they eventually be connected into a grid, thus reversing the manner in which mini-grids are currently conceived? As for economic models, there are two competing business models for decentralized individual systems: mini-utilities, which effectively supply current, and mini-leasers, which effectively supply equipment. Which model will come out on top? One of them, or both of them?

Finally, this sector has seen the birth of businesses that are entirely African-owned, even if their creators are not always African. It is practically a certainty that in the next thirty years, some of these businesses will be among the top players in the African market. Indeed, the economic growth of the sector is very important, driven by both the socio-economic performance of the proposed solutions, and the mobilisation of international funding to support it. Despite the importance of social actors in this field, it is not only NGOs that are investing in it: investment funds—primarily from North America (but there are French ones too...!), multinationals from the energy sector and telecommunications companies are becoming increasingly involved in securing the financial success of what is considered to be the next big industry.

When I began my career in development thirty years ago, I thought with sadness that of all the major challenges associated with the fight against poverty, "last mile access" to energy would be the most difficult to overcome, and I was sure that I would never see it in my lifetime. The revolution of decentralized energy in Africa is both humbling and exciting: because in its most ambitious version, in countries where centralized structures are particularly lacking, the "last mile" will perhaps be crossed before the first, and it would seem that a great part of this rural energy battle may be won in the next thirty years... with the immense impact on poverty and development that one might expect. Bravo Africa!